

**REMARKS**

As a preliminary matter, Applicant wishes to thank Examiner Van for the courtesy extended in granting the personal interview that took place on February 17, 2009. Although no agreement was reached, the Examiner appeared to appreciate the distinctions between the cited references and the subject matter of the present application described by Applicant during the interview. While Applicant believe that the claims, as previously presented, clearly distinguish over the cited art, Applicant has taken into account the Examiner's comments and have amended the claims herein in a manner that even further distinguishes them from the cited art. In view of these amendments, and for the reasons discussed below, a notice of allowance is respectfully requested.

In the Final Office Action mailed September 2, 2008, the Examiner:

rejected claims 72-78 and 85 under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 6,475,369 to Cohen ("Cohen");

rejected claims 81-84, 93, 94, and 96 under 35 U.S.C. § 103(a) as allegedly obvious over Cohen;

rejected claims 79 and 80 under 35 U.S.C. § 103(a) as allegedly obvious over Cohen in view of U.S. Patent No. 3,190,822 to Burnham ("Burnham");

rejected claims 86-89 under 35 U.S.C. § 103(a) as allegedly obvious over Cohen in view of U.S. Patent No. 6,036,833 to Tang et al. ("Tang");

rejected claims 90, 91, and 95 under 35 U.S.C. § 103(a) as allegedly obvious over Cohen in view of U.S. Patent No. 5,196,109 to Scott ("Scott"); and

rejected claim 92 under 35 U.S.C. § 103(a) as allegedly obvious over Cohen in view of U.S. Patent No. 4,932,518 to Bernards et al. ("Bernards").

Claims 72-86, 90, and 95 are amended by this reply. Claims 97-99 are new. No new matter is added by this reply. Claims 72-99 are pending.

The February 17<sup>th</sup> interview focused on the Cohen reference. Applicant's representatives expressed their view that the claims as written were neither taught or suggested by Cohen. For example, Figure 11 as relied on by the Examiner, discloses a structure where anode material 10 is on a side of support 8 opposite to any structure that can be fairly characterized as a cavity. Therefore, as Applicant's representatives explained, there is no deposit in Cohen of anode material in a cavity as defined in the claims.

In response, the Examiner pointed to a passage in column 7 of Cohen mentioning redressing of the anode, where support 8 is identified in the alternative as an anode. Using this interpretation, the Examiner sought to apply Cohen to the claims. Even with this reading, Applicant's representatives did not agree that Cohen teaches or suggests the claimed invention. Nevertheless, in order to avoid the cost and delay of appeal, Applicant has amended the claims to further highlight the differences between the invention and the cited art.

In the interview it was noted that Cohen discloses alternative materials for its various disclosed components, such as support 8. Applicant expressed the concern that in order to construct a rejection, the Examiner switched his interpretation of Cohen depending on the claim element under discussion. For purposes of responding to the

prior rejections as they apply to the newly amended claims, Applicant focuses on the Examiner's reading of Cohen's support 8 as a soluble anode material. Even when read in this way, there are many reasons why the claims, as amended, are neither taught nor suggested by Cohen.<sup>1</sup>

Claim 72, as amended, recites ,a unique combination including "providing a master electrode for receiving soluble anode material, the master electrode having an electrically conductive surface less soluble than the soluble anode material, and an insulating pattern layer arranged directly on the less soluble surface," With reference to Cohen as the Examiner explained his reading of it to reject claim 72, support 8 is a soluble anode material, which is later redressed. Thus, even if the mask 6 of Cohen is interpreted as an insulating layer, mask 6 is not arranged on a surface less soluble than the material to be received in the cavity. For in such instance, the two materials are the same. Therefore, claim 72 patentably distinguishes over Cohen for a first reason.

Moreover, claim 72 recites a unique combination wherein "the insulating pattern layer cooperat[es] with the less soluble surface to define at least one cavity substantially devoid of soluble anode material." When read as the Examiner explained he does to reject the claims, Cohen's cavity is not defined by an insulating pattern cooperating with the "less soluble surface." Rather, as discussed above, Cohen's cavity would include a surface as the same solubility of the soluble anode material. Thus, claim 72 patentably distinguishes over Cohen for this second reason.

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<sup>1</sup> While Applicant does not necessarily agree with the Examiner's reading, when support 8 in Cohen is read as being other than a soluble anode material, the invention is further distinguished from Cohen.

Further, claim 72 recites a unique combination including "depositing a quantity of soluble anode material onto the less soluble surface of the cavity..." Regardless of how the Examiner reads Cohen, Cohen does not contain such a teaching or suggestion for two reasons. First, as discussed previously, if support 8 is interpreted as a soluble anode material, even if Cohen did make a deposit in the cavity, it would not be on the defined less soluble surface of the cavity. Second, as illustrated in Figure 11b for example, sacrificial metal 12 is spaced from, not deposited on the surface of support 8. Therefore, claim 72 distinguishes over Cohen for yet a third independent reason.

Claim 72 further recites a unique combination including "prevent[ing] soluble anode material from being disposed between the less soluble surface and the insulating pattern layer." Again, citing the redressing passage of Cohen, the Examiner chooses to read the mask 6 as being disposed directly on a soluble anode material. When read in this way, soluble anode material is not prevented from being disposed between the less soluble surface and the insulating pattern layer, because the mask is directly arranged on the soluble material. Therefore, claim 72 distinguishes over Cohen for this fourth reason.

Claim 72 additionally recites a unique combination including an insulating pattern layer that is "arranged directly on the less soluble surface in a manner substantially preventing undercutting" when a pattern is plated on a substrate. Applying the Examiner's previously mentioned reading of Cohen, Cohen does not correspond to the claims because when support 8 is read as a soluble anode material, then 1) the insulating layer is not "arranged directly on the less soluble surface", and 2) undercutting is not prevented (i.e., during plating there is nothing to stop the

degradation of the foundation upon which the insulating pattern is arranged. Thus, claim 72 distinguishes over Cohen for this fifth reason..

For all of the reasons stated above, Cohen fails to teach or suggest each and every element recited in independent claim 72, and therefore allowance of claim 72 is respectfully requested.

In addition, Applicant directs the Examiner's attention to newly added claim 97, which recites "successively plating a pattern on multiple electrically conductive substrates, and wherein the method includes substantially emptying the cavity of soluble anode material between plating of successive substrates." This claim finds support, for example in the specification at least at page 19, lines 16-24 and Figure 5b. There is absolutely no teaching or suggestion in the art or record of substantially emptying the cavity of soluble anode material between plating of successive substrates. Therefore, claim 97 is separately allowable for this additional reason.

Applicant submits new independent claim 98. While the Examiner will note a few definitional differences related to the deposition of soluble anode material in the cavity, there is significant similarity between independent claim 72 and independent claim 98. Applicant submits that claim 98 is allowable for reasons discussed above in connection with claim 72, and respectfully requests allowance of claim 98. In addition, aside from its dependency, newly added dependent claim 99 mirrors dependent claim 97, and is at least allowable for the reasons discussed above in connection with claim 97.

Applicant respectfully traverses the rejection of claims 79-84 and 86-96 under 35 U.S.C. §103(a) as unpatentable over combinations of Cohen, Burnham, Tang, Scott,

and Bernards. Each of Burnham, Tang, Scott, and Bernards and Official Notice fails to remedy the deficiencies of Cohen as discussed above.

The Examiner further relies on Official Notice to reject claims 81-84, 93, 94 and 96. Applicant requests that the Examiner provide documentary evidence to support each assertion of Official Notice. Absent documentary evidence, the Office Action has failed to make a *prima facie* case of obviousness regarding dependent claims 81-84, 93, 94 and 96.

Claims 79-84 and 86-96 are allowable over the prior art at least due to their dependencies on allowable independent claims 72. Accordingly Applicant respectfully requests the Examiner withdraw the rejection of claims 79-84 and 86-96 under 35 U.S.C. §103(a) and allow these claims.

The Final Office Action alleges that claims 81-84 may be drawn to new matter. Final Office Action p. 9-10. Applicant respectfully disagrees. The Examiner's attention is directed to the teaching of the structure of the master electrode at page 12, lines 8-12; page 15, lines 19-20; and Figure 3 supporting claim 81; the teaching of the group of electrically conductive surfaces of the master electrode and the substrate at, for example, page 12, lines 22-25; page 15, lines 29-30; and page 8, line 31 supporting claim 82; the teaching of replicating a semiconductor structure on the surface of a substrate at, for example, page 17, line 6 and page 1, lines 21-24 supporting claim 83; and the teaching of replicating structures in conductive polymers on the surface of the substrate at, for example, page 17, line 6 and page 1 lines 21-24 supporting claim 84.

The Office Action contains characterization of the invention and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise,

Applicant respectfully declines to subscribe to any statement or characterization in the Office Action.

**CONCLUSION**

In view of the foregoing, the pending claims are neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the Examiner's reconsideration of the application, and the timely allowance of the pending claims.


If a telephone interview will expedite issuance of this application, the Examiner is requested to call Applicant's representative whose name and registration number appear below at (202) 408-4214, to discuss any remaining issues.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By:   
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